



July 2, 2018

**VIA ELECTRONIC FILING**

Ms. Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 Twelfth Street, SW  
Washington, DC 20554

**Re: Ex Parte Presentation,** *Promoting Investment in the 3550-3700 MHz Band*  
GN Docket No. 17-258

Dear Ms. Dortch,

As the Commission is well aware, the race to 5G is on, the stakes are high, and spectrum availability is a key.<sup>1</sup> Continued wireless leadership is particularly important given the economic benefits at stake. As a recent report showed, U.S. leadership in 4G development and deployment resulted in a \$100 billion increase in our nation's gross domestic product and an 84 percent increase in wireless-related jobs. As a result, today the U.S. wireless industry supports more than 4.7 million jobs and contributes \$475 billion annually to the economy.<sup>2</sup>

As an important step, CTIA urges the Commission to act quickly on the 3.5 GHz Notice of Proposed Rulemaking adopted last fall and take the following actions:

- Revise the geographic area license size for Priority Access Licenses ("PALs"), consistent with the CTIA/CCA compromise proposal, to promote investment, innovation, and intensive use by a

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<sup>1</sup> David Abecassis, Chris Nickerson, and Janette Stewart, *Global Race to 5G – Spectrum and Infrastructure Plans and Priorities*, ANALYSYS MASON, at 37 (Apr. 2018), [https://api.ctia.org/wp-content/uploads/2018/04/Analysys-Mason-Global-Race-To-5G\\_2018.pdf](https://api.ctia.org/wp-content/uploads/2018/04/Analysys-Mason-Global-Race-To-5G_2018.pdf).

<sup>2</sup> See *How America's 4G Leadership Propelled the U.S. Economy*, RECON ANALYTICS (Apr. 2018), [https://api.ctia.org/wp-content/uploads/2018/04/Recon-Analytics\\_How-Americas-4G-Leadership-Propelled-US-Economy\\_2018.pdf](https://api.ctia.org/wp-content/uploads/2018/04/Recon-Analytics_How-Americas-4G-Leadership-Propelled-US-Economy_2018.pdf); see also *The Global Race to 5G*, CTIA (Apr. 2018), <https://api.ctia.org/wp-content/uploads/2018/04/Race-to-5G-Report.pdf>.



broad array of stakeholders;

- Adopt a 10-year license term for PALs, with an expectation of renewal;
- Adopt a substantial service performance requirement for PALs, coupled with a safe harbor based on population coverage, along with a renewal standard; and
- Repeal the public disclosure rule for device registration information, as it creates substantial risks to network security and proprietary information without countervailing benefits.

By taking these steps, the Commission can ensure that the 3.5 GHz band is put to its highest use for the benefit of our economy, businesses, and consumers.

***The CTIA-CCA Compromise Proposal on Geographic License Areas Will Promote Investment and Innovation from a Wide Variety of Stakeholders.*** CTIA and CCA submitted a compromise proposal for PAL geographic license areas: Metropolitan Statistical Areas (“MSAs”) in the top 306 Cellular Market Areas (“CMAs”) and 2,437 county-sized license areas in the remaining 428 CMAs.<sup>3</sup> This proposal represents a greater than 600 percent increase in the number of PALs that would be available as compared to Partial Economic Areas (“PEAs”), which the Commission has adopted for several recent auctions.<sup>4</sup> Along with new rules to facilitate license partitioning, disaggregation, and leasing, this approach offers a compromise that ensures a variety of stakeholders can vie for PALs and match PAL rights with business plans. In contrast, the current licensing framework, and any census tract-based proposal, remains deeply troubling. As CTIA recently explained, the administrability of an auction with 74,000 separate licensed areas and hundreds of thousands of individual licenses is still an unknown and in any event will cause delay as the Commission prepares for such an auction; census tracts create economic inefficiencies, increase the cost of deployment, and harm rural investment; and census tract-based license borders give

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<sup>3</sup> See Letter from Rebecca Murphy Thompson, Competitive Carriers Association, and Scott K. Bergmann, CTIA, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 17-258 (filed Apr. 20, 2018).

<sup>4</sup> See, e.g., *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd 6567 ¶ 71 (2016) (adopting PEAs for the 600 MHz band); *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services Establishing a More Flexible Framework to Facilitate Satellite Operations in the 27.5-28.35 GHz and 37.5-40 GHz Bands et al.*, Report and Order, 31 FCC Rcd 8014 ¶ 82 (2016) (“2016 Spectrum Frontiers Order”) (adopting PEAs for the 39 GHz band); *id.* ¶ 121 (adopting PEAs for the upper band segment of the 37 GHz band); *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services et al.*, Second Report and Order, 32 FCC Rcd 10988 ¶ 28 (2017) (adopting PEAs for the 24 GHz band); *id.* ¶ 50 (adopting PEAs for the 47.2-48.2 GHz band).



rise to interference concerns.<sup>5</sup> CTIA therefore continues to ask that the Commission adopt a geographic area for Citizens Broadband Radio Service (“CBRS”) licenses that does not include census tracts as part of the equation.

***A 10-Year License Term for PALs with a Renewal Expectancy Is Critical to Support Successful Network Buildout.*** The record confirms that a 10-year renewable license term is critical to the success of the CBRS ecosystem.<sup>6</sup> Network buildout involves “a multi-year process” that “includes standardizing a new frequency band, developing and certifying equipment, introducing a new band into end-user devices, and deploying infrastructure.”<sup>7</sup> And the small cell deployments envisioned for the 3.5 GHz band will “add an even greater layer of complexity to roll-out.”<sup>8</sup> Quite simply, a three-year term with a re-auction policy provides an inadequate opportunity for operators to deploy networks and seek a return on their investment.<sup>9</sup> As former FCC Chief Economist Michelle Connolly has concluded, the current CBRS rules – as compared to the more standard 10-year license term framework with a renewal expectancy that has been used for other bands – would severely diminish the “license valuation, investment, and [] subsequent value to consumers.”<sup>10</sup> Moreover, stakeholders point out that 10-year

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<sup>5</sup> Letter from Scott K. Bergmann, CTIA, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 17-258 (filed June 15, 2018).

<sup>6</sup> See e.g., Comments of CTIA, GN Docket No. 17-258, at 4-8 (filed Dec. 28, 2017) (“CTIA Comments”); Comments of Ericsson, GN Docket No. 17-258, at 5 (filed Dec. 28, 2017) (“Ericsson Comments”); Comments of Nokia, GN Docket No. 17-258, at 2-3 (filed Dec. 28, 2017) (“Nokia Comments”); Comments of Mobile Future, GN Docket No. 17-258, at 5-7 (filed Dec. 28, 2017); Joint Comments of the National Rural Telecommunications Cooperative (“NRTC”) and the National Rural Electric Cooperative Association (“NRECA”), GN Docket No. 17-258, at 3-5 (filed Dec. 28, 2017) (“NRTC and NRECA Comments”); Comments of T-Mobile USA, Inc., GN Docket No. 17-258, at 4-6 (filed Dec. 28, 2017); Comments of the Telecommunications Industry Association, GN Docket No. 17-258, at 2 (filed Dec. 28, 2017); Comments of United States Cellular Corporation, GN Docket No. 17-258, at 9-12 (filed Dec. 28, 2017) (“USCC Comments”); Comments of Verizon, GN Docket Nos. 17-258, 12-354, at 5 (filed Dec. 28, 2017) (“Verizon Comments”).

<sup>7</sup> Verizon Comments at 5.

<sup>8</sup> Reply Comments of Nokia, GN Docket No. 17-258, at 3 (filed Jan. 29, 2018).

<sup>9</sup> See e.g., Comments of Michelle Connolly, Ph.D., Impact of Proposed Changes to Improve Investment in the 3550-3700 MHz Band, at 4 (Jan. 29, 2018), *attached to* CTIA Reply Comments.

<sup>10</sup> *Id.*



terms with an expectation of renewal would give “rural service providers and utilities the long-term certainty required to invest in mission critical solutions utilizing the CBRS spectrum.”<sup>11</sup>

Accordingly, the Commission should follow the proven approach in other bands for innovative services and adopt its proposal to increase the PAL term to 10 years. Likewise, it should reject the current untested and administratively burdensome re-auction policy in favor of a renewal expectancy, which will encourage investment in the CBRS band.

***A Substantial Service Showing Best Addresses Calls for a PAL Performance Requirement and a Renewal Standard.*** CTIA and others have long observed that the unique nature of the CBRS rules – namely the “use it or share it” policy – obviates the need for a PAL performance requirement.<sup>12</sup> PAL spectrum is available for General Authorized Access (“GAA”) use unless and until the PAL holder is ready to put the spectrum to use. PAL frequencies, therefore, will not lie fallow if demand exists, and thus there can be no warehousing of PAL spectrum. Market demand will determine whether PAL spectrum is put to use, not a licensee’s business plans.

Nonetheless, to the extent the Commission seeks a PAL performance requirement, a substantial service standard, coupled with a population-based safe harbor, best accounts for the as-yet-unknown uses of the 3.5 GHz spectrum.

The 3.5 GHz band will be used in many ways to serve different customers. It could involve area-wide 5G broadband services or point-to-point links. It could be used for mobile broadband to the general population or to target specific industries or individual locations, such as hospitals, corporate campuses, educational institutions, government agencies, or public safety. Inflexible coverage- or geographic-based performance rules risk deterring investment in innovative services. A performance requirement for PALs should embrace flexibility, and a substantial service requirement does just that.

Thus, to the extent the Commission believes a performance requirement is necessary, it should

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<sup>11</sup> NRTC and NRECA Comments at 4.

<sup>12</sup> See, e.g., CTIA Comments at 6-7; Comments of AT&T Services, Inc., GN Docket No. 17-258, at 13-14 (filed Dec. 28, 2017) (“AT&T Comments”); Verizon Comments at 6-8.



adopt a performance requirement that PAL holders demonstrate at the end of the license term that they have provided “substantial service” in their licensed service area. As it does for other wireless bands with a substantial service requirement,<sup>13</sup> the Commission should assess licensees’ showings on a case-by-case basis, and the evaluation should be guided by the unique characteristics of CBRS spectrum and the services that are deployed.<sup>14</sup>

Some licensees may prefer a bright-line performance benchmark for certainty and predictability. To that end, the Commission should adopt the following safe harbor: a licensee that makes service available to at least 40 percent of the population in its licensed area by the end of its license term will be deemed to be providing substantial service. This would be consistent with the approach taken by the Commission in the *Spectrum Frontiers* proceeding, where it adopted a 40 percent population coverage benchmark for licensees offering mobile or point-to-multipoint services.<sup>15</sup>

A substantial service obligation coupled with a population-based safe harbor will best promote the objectives of performance requirements and will allow the unique opportunities presented in the 3.5 GHz band to deliver a wide range of exciting new services to businesses and the American public.

The Commission should also extend to PALs the license renewal standard adopted in the Wireless

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<sup>13</sup> This approach is consistent with the Commission’s longstanding case-by-case substantial service requirement, which applies to the Personal Communications Service (“PCS”) and certain Advanced Wireless Service (“AWS”) and Wireless Communications Service (“WCS”) licenses. See, e.g., 47 C.F.R. §§ 24.203(d) (broadband PCS licenses), 27.14(a) (AWS-1 and WCS licenses).

<sup>14</sup> Starry notes that “CBRS is designed to meet myriad use cases” and acknowledges that the Commission may wish to adopt a substantial service performance requirement. See Letter from Virginia Lam Abrams, Starry, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 17-258, at 3 and n.10 (filed Mar. 19, 2018) (“Starry Letter”). But it goes on to call for a payment-as-performance rule that would force a PAL holder to pay up to its winning bid at auction as a performance showing within the renewal period, *id.* at 4, diverting funds from 3.5 GHz deployments for no good reason. The Commission should readily reject this proposal.

<sup>15</sup> See 2016 Spectrum Frontiers Order at 8088, ¶ 206. While the population benchmark adopted in the *Spectrum Frontiers* proceeding for Upper Microwave Flexible Use Service (“UMFUS”) licensees is a performance requirement and not a safe harbor, UMFUS licensees are not subject to the use-it-or-share-it policy that is applied to the 3.5 GHz band, which will deter warehousing and promote service. This difference, along with the innovative uses expected in the CBRS band, warrants adopting a substantial service/safe harbor performance requirement.



Radio Service (“WRS”) proceeding – namely, a PAL holder should certify that it has provided substantial service and continues to do so, and that no permanent discontinuance of service occurred during the license term.<sup>16</sup> Applying the existing WRS renewal standard to CBRS licensees will promote the Commission’s objective to adopt harmonized, unified renewal rules for wireless licensees.

**Public Disclosure of CBSD Information Poses Real Risks with No Countervailing Benefits.** CTIA continues to support the *Notice*’s proposal to eliminate the public disclosure rule for Citizens Broadband Radio Service Device (“CBSD”) registration information. The record reveals widespread concern about unnecessary security risks generated by the public disclosure rule, as well as the release of confidential business information that is not made available as part of other flexible-use service rules. Potential CBRS users can gain access to the information they seek on a confidential basis from any of the Spectrum Access Systems (“SASs”), without creating these risks. The rule is unwarranted and should be eliminated. The Commission should therefore dismiss Starry’s call to maintain the rule.<sup>17</sup>

Chairman Pai recently affirmed that “[t]he importance of securing [our communications] networks is even clearer today, in an age when they’ve become the indispensable infrastructure of our modern economy.”<sup>18</sup> The record shows significant concern regarding the disclosure rule as being at odds with that policy, and strong support from numerous entities – including rural and nationwide wireless providers, wireless device manufacturers, SAS applicants, and cable providers and cable industry representatives – for repealing it.<sup>19</sup> As AT&T has noted, “[m]aking CBSD registration information publicly

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<sup>16</sup> 47 C.F.R. § 1.949(e).

<sup>17</sup> See *Promoting Investment in the 3550-3700 MHz Band, Notice of Proposed Rulemaking*, 32 FCC Rcd 8071, 8085, ¶ 37 (2017) (“*Notice*”); see also Starry Letter.

<sup>18</sup> Ajit Pai, *No Spring Break for the FCC*, FCC BLOG (Mar. 26, 2018), <https://www.fcc.gov/news-events/blog/2018/03/26/no-spring-break-fcc>.

<sup>19</sup> See CTIA Comments at 11-12; Comments of Alaska Communications, GN Docket No. 17-258, at 8 (filed Dec. 28, 2017) (“Alaska Communications Comments”); AT&T Comments at 12-13; Comments of Comcast Corporation, GN Docket No. 17-258, at 31-32 (filed Dec. 28, 2017) (“Comcast Comments”); Comments of Comsearch, GN Docket No. 17-258, at 2-3 (filed Dec. 28, 2017); Ericsson Comments; Comments of NCTA-The Internet & Television Association, GN Docket No. 17-258, at 17 (filed Dec. 28, 2017) (“NCTA Comments”); Nokia Comments at 5; Reply Comments of T-Mobile USA, Inc., GN Docket No. 17-258, at 11-12 (filed Jan. 29, 2018); Comments of Union



available flies in the face of nationwide efforts to protect key infrastructure from cybersecurity threats.”<sup>20</sup>

Beyond security concerns, the record shows that network infrastructure data (e.g., geographic locations, power levels, and transmission characteristics such as antenna sectors, patterns, or orientation) is considered confidential business information in the highly competitive wireless marketplace.<sup>21</sup> The Commission does not impose this type of disclosure requirement on other flexible-use services with area-wide licenses, contrary to Starry’s claim.<sup>22</sup> For example, for PCS, AWS, and 700 MHz services, the details of a licensee’s choice of where it deploys wireless base station facilities is a private activity and not generally disclosed to the Commission or otherwise made public.<sup>23</sup> And while many wireless providers disclose information regarding service coverage, they do not convey the network information that Rule 96.55 would require. Further, while some service rules like Parts 25 and 101 require disclosure of fixed locations for satellite earth stations and fixed point-to-point microwave operations,<sup>24</sup> such rules are strictly part of the Commission’s interference protection and coordination regime. There is no such public policy rationale here: the Spectrum Access Systems fulfill those functions in real time.

Moreover, there are no countervailing benefits to public disclosure that would offset these harms. Starry asserts that new entrants would “lack information necessary to design and plan networks” without public disclosure of CBSD registration information,<sup>25</sup> but that information can be obtained from a SAS on a confidential basis.

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Pacific, GN Docket No. 17-258, at 11-12 (filed Dec. 28, 2017); USCC Comments at 18-19; Verizon Comments at 16-17.

<sup>20</sup> Reply Comments of AT&T Services, Inc., GN Docket No. 12-354, at 9 (filed Aug. 8, 2017).

<sup>21</sup> See, e.g., Comcast Comments at 31; CTIA Comments at 12; NCTA Comments at 17; Ericsson Comments at 7.

<sup>22</sup> Starry Letter at 1.

<sup>23</sup> While towers over 200 feet or near an airport glide path may require antenna structure registration (“ASR”), see 47 C.F.R. §§ 17.4, 17.7, the information in such registrations is limited to the tower and its owner; ASRs do *not* include carrier-specific data about antennas that may be deployed on a tower or their operating characteristics. See FCC Form 854.

<sup>24</sup> 47 C.F.R. §§ 25.115, 101.103.

<sup>25</sup> Starry Letter at 1.



The Commission should likewise reject Starry’s claim that without public location information there cannot be a functioning secondary market.<sup>26</sup> As with any Commission auction, the list of winning bidders will be a matter of public record. Interested stakeholders may contact the license holder to explore a spectrum lease or sale. SASs, moreover, will make this process even easier. As Nokia has explained, SAS technology “facilitates a frictionless subleasing market, empowering prospective users to request from licensees CBRS spectrum in highly-customizable geographic areas to meet their needs.”<sup>27</sup>

Starry’s alternative proposal to require disclosure of “partially obscure[d]” location information, while still making available “[a]ll other registration information, save for registrants’ names,” is equally unavailing.<sup>28</sup> The proposal does not remedy the concerns raised in the record because the risks associated with the public disclosure of CBSD registration information go beyond disclosure of location information.<sup>29</sup> The record supports the *Notice*’s concern that publicly releasing information such as radio configuration or whether the CBSD will be outdoors or indoors is also likely to “compromise the security of critical network deployments [and] be considered competitively sensitive.”<sup>30</sup> Even partially obscured data could be used to identify a competitor’s market entry plans and network architecture.

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The importance of the 3.5 GHz band to next-generation wireless connectivity has been well documented in this proceeding. CTIA continues to urge the Commission to expeditiously adopt rules that will promote investment in this mid-band spectrum so that the U.S. can recapture the lead in 5G-readiness and ensure that American consumers and businesses can reap the economic and social benefits of continued leadership in wireless.

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<sup>26</sup> *Id.* at 2-3.

<sup>27</sup> Letter from Jeffrey A. Marks, Nokia, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 17-258 *et al.*, at 1 (filed Mar. 26, 2018).

<sup>28</sup> Starry Letter at 2.

<sup>29</sup> *Id.* at 2-3.

<sup>30</sup> *Notice* at 8085, ¶ 37. See *also, e.g.*, Alaska Communications Comments at 8; Ericsson Comments at 8.





Pursuant to Section 1.1206 of the Commission's rules, a copy of this letter is being filed in ECFS. Please do not hesitate to contact the undersigned with any questions.

Sincerely,

/s/ Scott K. Bergmann

Scott K. Bergmann  
Senior Vice President, Regulatory Affairs